

IN THE CLAIMS

Please amend the claims as follows:

Claim 1 (Currently Amended): A system for ~~managing racks~~ delivering and collecting an article delivery-and-collection apparatus used for packing, storing or delivering articles, the ~~racks~~ article delivery-and-collection apparatus being assembled from a plurality of ~~rack~~ apparatus components stocked at a management center, and repeatedly used for packing storing or delivering articles, said system comprising:

a specification unit configured to specify a plurality of first ~~rack~~ apparatus components required to assemble a first ~~rack~~ delivery-and-collection apparatus used to pack a first article for delivery to a delivery site, and second ~~rack~~ apparatus components that are not required to assemble said first ~~rack~~ delivery-and-collection apparatus yet required to assemble a second ~~rack~~ delivery-and-collection apparatus used to pack a second article to be collected from said delivery site when said first article is delivered; and

an instruction unit configured to provide instructions for a delivery procedure for said first article and a collection procedure for said second article, said instructions including directions for assembling said second ~~rack~~ delivery-and-collection apparatus using at least one of said first ~~rack~~ apparatus components, along with said second ~~rack~~ apparatus components specified by said specification unit.

Claim 2 (Currently Amended): The system according to claim 1, wherein said ~~rack~~ apparatus components comprise a pallet where an article is loaded, a plurality of supports detachably fitted to said pallet, and at least one of a top covering said plurality of supports and shock absorbing members disposed between said supports and said article.

Claim 3 (Currently Amended): The system according to claim 1, wherein said first ~~rack~~ apparatus components are supplied from said management center to a production site, assembled together with said first article at said production site to be stored in a sales-use warehouse, and are shipped together with said first article from said sales-use warehouse to a worksite to await delivery to said delivery site.

Claim 4 (Currently Amended): The system according to claim 3, wherein said instruction unit is configured to instruct said management center to deliver said first ~~rack~~ apparatus components to said production site.

Claim 5 (Currently Amended): The system according to claim 1, wherein said instruction unit comprises:

a confirmation unit configured to manage unused ~~rack~~ apparatus components and confirm whether said second ~~rack~~ apparatus components are stocked at a ~~rack~~ apparatus collection center that delivers said ~~rack~~ apparatus components to said management center; and

a ~~rack~~ apparatus delivery instruction unit configured to instruct said rack collection center to deliver said second rack components to said worksite when it is confirmed by said confirmation unit that said rack collection center stocks said second rack components.

Claim 6 (Currently Amended): The system according to claim 5, wherein, when it is confirmed by said confirmation unit that said ~~rack~~ apparatus collection center does not stock said second ~~rack~~ apparatus components, said ~~rack~~ apparatus delivery instruction unit is configured to instruct said management center to deliver said second ~~rack~~ apparatus

components together with said first ~~rack~~ apparatus components to said ~~rack~~ apparatus collection center.

Claim 7 (Currently Amended): The system according to claim 1, wherein said instruction unit is configured to instruct a worksite to collect said second article using third ~~rack~~ apparatus components that can be used for delivering said first article and collecting said second article, and also using said second ~~rack~~ apparatus components after said first article is delivered with said first ~~rack~~ apparatus components.

Claim 8 (Currently Amended): The system according to claim 7, wherein said instruction unit comprises:

a first instruction unit configured to instruct a worksite to affect delivery of said first article using said first ~~rack~~ apparatus components and collect any ~~rack~~ apparatus components except said third ~~rack~~ apparatus components that can be used for delivering said first article and collecting said second article after the delivery is finished; and

a second instruction unit which instructs said worksite to collect said second article using said third ~~rack~~ apparatus components and said second ~~rack~~ apparatus components.

Claim 9 (Previously Presented): The system according to claim 1, wherein both of said first article and said second article are image formation devices.

Claim 10 (Previously Presented): The system according to claim 1, wherein said first article is an image formation device, and said second article is any device other than said image formation device.

Claim 11 (Canceled).

Claim 12 (Withdrawn): A method of managing rack operation, in which a worksite delivers an article to be delivered to a customer using an assembled rack so as to enable disassembly with a plurality of rack components stocked at a management center, and an empty rack after delivery is collected from said worksite to said management center to be repeatedly used, said method comprising:

a specifying step of specifying first rack components required for delivery of a first article and second rack components that are not required for delivery said first article yet required for collecting a second article when said first article is delivered to said customer and said second article is collected from said customer; and

an instructing step of instructing a delivery procedure and a collection procedure of said article using said first rack components and said second rack components specified in the specifying step, to said worksite.

Claim 13 (Withdrawn): The method of managing rack operation according to claim 12, wherein said rack components are a pallet where an article is loaded, a plurality of supports detachably fitted to said pallet, and a top covering said plurality of supports, or shock absorbing members disposed between said supports and said article.

Claim 14 (Withdrawn): The method of managing rack operation according to claim 12, wherein said first rack components are supplied from said management center to a production site, assembled together with said first article at said production site to be stored in a sales-use warehouse, and are shipped together with said first article from said sales-use warehouse to said worksite.

Claim 15 (Withdrawn): The method of managing rack operation according to claim 14, wherein the instructing step includes a step of instructing said management center to deliver said first rack components to said production site.

Claim 16 (Withdrawn): The method of managing rack operation according to claim 12, wherein the instructing step includes,

a confirming step of managing said rack components collected from said worksite and confirming whether said second rack components are stocked at a rack collection center that delivers said rack components when stocked more than a predetermined number to said management center; and

a rack delivery instructing step of instructing said rack collection center to deliver said second rack components to said worksite when it is confirmed in the confirming step that said rack collection center stocks said second rack components.

Claim 17 (Withdrawn): The method of managing rack operation according to claim 16, wherein, the rack delivery instructing step includes a step of instructing said management center to deliver said second rack components together using said first rack components to said rack collection center when it is confirmed in the confirming step that said rack collection center does not stock said second rack components.

Claim 18 (Withdrawn): The method of managing rack operation according to claim 12, wherein the instructing step includes a step of instructing said worksite to collect said second article using third rack components, that can be used for delivering said first article

and collecting said second article, and also using said second rack components after said first article is delivered with said first rack components.

Claim 19 (Withdrawn): The method of managing rack operation according to claim 12, wherein the instructing step includes,

a first instructing step of instructing said worksite to deliver said first article using said first rack components and collect rack components except said third rack components, that can be used for delivering said first article and collecting said second article after the delivery is finished; and

a second instructing step of instructing said worksite to collect said second article using said third rack components and said second rack components.

Claim 20 (Withdrawn): The method of managing rack operation according to claim 12, wherein both of said first article and said second article are image formation devices.

Claim 21 (Withdrawn): The method of managing rack operation according to claim 12, wherein said first article is an image formation device, and said second article is any device other than said image formation device.

Claim 22 (Withdrawn): The method of managing rack operation according to claim 21, wherein device other than said image formation device is any one of a self-propelled device, a non-self-propelled device, a device that does not function singly, components forming a device, a container with liquid, gas or a solid burned to produce heat or power, and an empty container, or any substance to be conveyed consisting of a solid burned to produce heat or power, non-food/drinks or food/drinks.

Claim 23 (Withdrawn): A program for managing rack operation, with which a worksite delivers an article to be delivered to a customer using an assembled rack so as to enable disassembly with a plurality of rack components stocked at a management center, and an empty rack after delivery is collected from said worksite to said management center to be repeatedly used, said program comprising:

a specifying sequence for specifying first rack components required for delivery of a first article and second rack components that are not required for delivery of said first article yet required for collecting a second article when said first article is delivered to said customer and said second article is collected from said customer; and

an instructing sequence for instructing a delivery procedure and a collection procedure of said article using said first rack components and said second rack components specified in the specifying step, to said worksite.

Claim 24 (Withdrawn): A multistage rack management system, which manages a multistage rack assembled by a plurality of rack components so as to be disassembled and joins a plurality of racks to be repeatedly used to each other, said system comprising:

a management unit which manages said multistage rack in use based on information from a plurality of production sites which produce self-propelled devices, non-self-propelled devices, devices that do not function singly, and main bodies or components of products to be conveyed each as a part forming a device, and pack the devices or components in said multistage rack to deliver, and also based on information from a prespecified relay point that reassembles said multistage racks received from said respective production sites and delivers said reassembled multistage racks each formed with the main body and the components.

Claim 25 (Withdrawn): The multistage rack management system according to claim 24, wherein said rack is formed with a pallet where an article is loaded, a plurality of supports detachably fitted to said pallet, and a top covering said plurality of supports, or shock absorbing members disposed between said supports and said article, and said multistage rack is formed by stacking a second rack on the upper side of said pallet of a first rack.

Claim 26 (Withdrawn): The multistage rack management system according to claim 24, wherein said management unit includes,

an operating rack management table which manages locations of said multistage racks in use and rack components forming each of said multistage racks; and  
a table management unit which manages contents of said operating rack management table based on information from said plurality of production sites or said relay point.

Claim 27 (Withdrawn): The multistage rack management system according to claim 26, wherein, when assembly of a multistage rack with articles of the same type is notified from any of said production sites, said table management unit registers said multistage rack into said operating rack management table.

Claim 28 (Withdrawn): The multistage rack management system according to claim 27, wherein, when a plurality of racks are assembled to form a multistage rack or multistage racks are reassembled, said table management unit registers said multistage rack into said operating rack management table, or updates the information concerning said multistage racks registered into said operating rack management table based on barcode information obtained by reading key barcodes attached to said racks forming said multistage rack.

Claim 29 (Withdrawn): The multistage rack management system according to claim 27, wherein, when reassembly of said multistage racks is notified from said relay point, said table management unit updates the information concerning said multistage racks registered in said operating rack management table.

Claim 30 (Withdrawn): The multistage rack management system according to claim 29, wherein, when a plurality of racks are assembled to form a multistage rack or multistage racks are reassembled, said table management unit registers said multistage rack into said operating rack management table, or updates the information concerning said multistage racks registered in said operating rack management table based on barcode information obtained by reading key barcodes attached to said racks forming said multistage rack.

Claim 31 (Withdrawn): A multistage rack management method in which a multistage rack by being assembled with a plurality of rack components so as to be disassembled and joining a plurality of racks to be repeatedly used to each other is managed, said method comprising the step of:

managing said multistage racks in use based on information from a plurality of production sites which produce self-propelled devices, non-self-propelled devices, devices that do not function singly, and main bodies or components of products to be conveyed each as a part forming a device, and pack the devices or components in said multistage rack to deliver, and also based on information from a prespecified relay point that reassembles said multistage racks received from said respective production sites and delivers said reassembled multistage racks each formed with the main body and the components.

Claim 32 (Withdrawn): The multistage rack management method according to claim 31, wherein said rack is formed with a pallet where an article is loaded, a plurality of supports detachably fitted to said pallet, and a top covering said plurality of supports, or shock absorbing members disposed between said supports and said article, and said multistage rack is formed by stacking a second rack on the upper side of said pallet of a first rack.

Claim 33 (Withdrawn): The multistage rack management method according to claim 31 further comprising the step of:

managing the contents of an operating rack management table which manages locations of said multistage racks in use and rack components forming each of said multistage racks based on information from said plurality of production sites or said relay point.

Claim 34 (Withdrawn): The multistage rack management method according to claim 33, wherein, when assembly of a multistage rack with articles of the same type is notified from any of said production sites, said multistage rack is registered into said operating rack management table.

Claim 35 (Withdrawn): The multistage rack management method according to claim 34, wherein, when a plurality of racks are assembled to form a multistage rack or multistage racks are reassembled, said multistage rack is registered into said operating rack management table, or the information concerning said multistage racks registered in said operating rack management table is updated based on barcode information obtained by reading key barcodes attached to said racks forming said multistage rack.

Claim 36 (Withdrawn): The multistage rack management method according to claim 34, wherein, when reassembly of said multistage racks is notified from said relay point, the information concerning said multistage racks registered in said operating rack management table is updated.

Claim 37 (Withdrawn): The multistage rack management method according to claim 36, wherein, when a plurality of racks are assembled to form a multistage rack or multistage racks are reassembled, said multistage rack is registered into said operating rack management table, or the information concerning said multistage racks registered in said operating rack management table is updated based on the barcode information obtained by reading key barcodes attached to said racks forming said multistage rack.

Claim 38 (Withdrawn): A multistage rack management program with which a multistage rack by being assembled with a plurality of rack components so as to be disassembled and joining a plurality of racks to be repeatedly used to each other is managed, said multistage rack management program for making a computer execute the method of managing said multistage rack in use based on information from a plurality of production sites which produce self-propelled devices, non-self-propelled devices, devices that do not function singly, and main bodies or components of products to be conveyed each as a part forming a device, and pack the devices or components in said multistage rack to deliver, and also based on information from a prespecified relay point that reassembles said multistage racks received from said respective production sites and delivers said reassembled multistage racks each formed with the main body and the components.

Claim 39 (Withdrawn): An article conveyance and storage device comprising: pallet and a plurality of supports detachably fitted to said pallet, said supports including a support coupling unit, which detachably couples at least two supports detached from said pallet to each other adjacently in substantially parallel with each other.

Claim 40 (Withdrawn): The article conveyance and storage device according to claim 39, wherein said support coupling unit has a projecting portion formed on one of supports to be coupled and a recessed portion that is formed on the other support and is engaged with said projecting portion.

Claim 41 (Withdrawn): The article conveyance and storage device according to claim 39, wherein said support includes a fitting part, that combines a bundle of at least two supports coupled to each other with another bundle of supports adjacently in substantially parallel with each other.

Claim 42 (Withdrawn): The article conveyance and storage device according to claim 39 further comprising a top which is detachably fixed to the upper parts of a plurality of supports fitted to said pallet.

Claim 43 (Withdrawn): The article conveyance and storage device according to claim 42, wherein said top has top positioning units each of which positions said support and said top by holding the upper part of said support when said top is fixed to the upper parts of said plurality of supports.

Claim 44 (Withdrawn): The article conveyance and storage device according to claim 43, wherein said top includes,

a lock unit which locks said top to each of said supports when said top is fixed to the upper parts of a plurality of said supports so that said top will not be disengaged from said supports.

Claim 45 (Withdrawn): The article conveyance and storage device according to claim 44, wherein said lock unit has a lock hole made on said support and a lock member which is slidably fixed to said top and whose edge part is fitted into said lock hole; and

springs, which energize said lock member in the direction to which said edge part of said lock member is fitted into said lock hole, are formed on said lock member itself.

Claim 46 (Withdrawn): The article conveyance and storage device according to claim 45, wherein an inclined surface is formed on an edge part of said lock member so that said edge part is brought into contact with an upper edge of said supports with pressure and pressurized by said upper edge when said top is pressed toward the upper parts of said supports in order to fix said top to the upper parts of said supports, said lock member is moved in the direction to which said lock member is disengaged from said lock hole against the action of said springs, and when said edge part of said lock member is positioned in said lock hole, said edge part is fitted into said lock hole by the action of said springs.

Claim 47 (Withdrawn): The article conveyance and storage device according to claim 46, wherein an inclined guide surface, which becomes gradually higher toward a central part of said top, is formed at least a part of a periphery of said top.

Claim 48 (Withdrawn): The article conveyance and storage device according to claim 39, wherein said pallet has fitting grooves into which the lower parts of said supports are fitted.

Claim 49 (Withdrawn): The article conveyance and storage device according to claim 39, wherein said pallet has pins with which the lower parts of said supports are engaged.

Claim 50 (Withdrawn): The article conveyance and storage device according to claim 39 further comprising:

article holding members each of which positions and holds said article on said pallet, wherein said article holding members can be fixed to the pallet at different positions.

Claim 51 (Withdrawn): The article conveyance and storage device according to claim 50, wherein said article holding member includes,

a fitting part which is detachably fitted into a mounting hole formed on the surface of said pallet;

an article placing part on which an article is placed; and

an article positioning part which is projected upward from said article placing part,

and

said article is loaded on said pallet through said article holding members.

Claim 52 (Withdrawn): The article conveyance and storage device according to claim 39, said support is formed with a molded product obtained by extruding resin or metal.

Claim 53 (Withdrawn): An article conveyance and storage device comprising:  
pallet and a plurality of supports detachably fitted to said pallet;  
a shock absorber disposed between an article loaded on said pallet and each of said  
supports fixed to said pallet; and  
a fixing unit that fixes said shock absorber to each of said support.

Claim 54 (Withdrawn): The article conveyance and storage device according to claim  
53, wherein said fixing unit includes,  
a protrusion provided on either said shock absorber or said support; and  
a fitting hole, provided on said shock absorber or said support to which said  
protrusion is not provided, into which said protrusion is fitted.

Claim 55 (Withdrawn): The article conveyance and storage device according to claim  
54, wherein said fitting hole is made on said support, and a plurality of fitting holes are  
formed on said support along its longitudinal direction.

Claim 56 (Withdrawn): The article conveyance and storage device according to claim  
53, wherein said fixing unit includes,  
a groove extending along the longitudinal direction of said support; and  
a protruding portion which is formed on said shock absorber and is fitted into said  
groove, and said protruding portion is provided at two or more positions apart from each  
other in the longitudinal direction of said shock absorber.

Claim 57 (Withdrawn): The article conveyance and storage device according to claim 56, wherein said protruding portion has protrusions which are engaged in said grooves to prevent disengagement of said protruding portion from said groove.

Claim 58 (Withdrawn): The article conveyance and storage device according to claim 53, wherein said shock absorber has at least one shock absorbing member whose internal side formed through blow molding is hollow.

Claim 59 (Withdrawn): The article conveyance and storage device according to claim 53, wherein said shock absorber has a plurality of shock absorbing members detachably coupled to each other in the direction of their thickness.

Claim 60 (Withdrawn): The article conveyance and storage device according to claim 53, wherein each of said supports has a support coupling unit which detachably couples two supports detached from said pallet adjacently in substantially parallel with each other, and the cross section of said supports are set so that a space, in which a shock absorber fixed to at least one of said supports is accommodated, is formed inside said supports.

Claim 61 (Withdrawn): The article conveyance and storage device according to claim 53 further comprising a top which is detachably fixed to the upper parts of said plurality of supports fitted to said pallet.

Claim 62 (Withdrawn): The article conveyance and storage device according to claim 61, wherein said top has top positioning units each of which positions said support and said

top by holding the upper part of said support when said top is fixed to the upper parts of said plurality of supports.

Claim 63 (Withdrawn): The article conveyance and storage device according to claim 62, wherein said top further comprises:

a lock unit which locks said top to each of said supports when said top is fixed to the upper parts of a plurality of said supports so that said top will not be disengaged from said supports.

Claim 64 (Withdrawn): The article conveyance and storage device according to claim 63, wherein said lock unit has a lock hole made on said support and a lock member which is slidably fixed to said top and whose edge part is fitted into said lock hole; and

springs, which energize said lock member in the direction to which said edge part of said lock member is fitted into said lock hole, are formed on said lock member itself.

Claim 65 (Withdrawn): The article conveyance and storage device according to claim 64, wherein an inclined surface is formed on an edge part of said lock member so that said edge part is brought into contact with an upper edge of said supports with pressure and pressurized by said upper edge when said top is pressed toward the upper parts of said supports in order to fix said top to the upper parts of said supports, said lock member is moved in the direction to which said lock member is disengaged from said lock hole against the action of said springs, and when said edge part of said lock member is positioned in said lock hole, said edge part is fitted into said lock hole by the action of said springs.

Claim 66 (Withdrawn): The article conveyance and storage device according to claim 65, wherein an inclined guide surface, which becomes gradually higher toward a central part of said top, is formed at least a part of a periphery of said top.

Claim 67 (Withdrawn): The article conveyance and storage device according to claim 53, wherein said pallet has fitting grooves into which the lower parts of said supports are fitted.

Claim 68 (Withdrawn): The article conveyance and storage device according to claim 53, wherein said pallet has pins with which the lower parts of said supports are engaged.

Claim 69 (Withdrawn): The article conveyance and storage device according to claim 53 further comprising article holding members each of which positions and holds said article on said pallet, wherein said article holding members can be fixed to said pallet at different positions.

Claim 70 (Withdrawn): The article conveyance and storage device according to claim 69, wherein said article holding member includes,

a fitting part which is detachably fitted into a mounting hole formed on the surface of said pallet;

an article placing part on which an article is placed; and

an article positioning part which is projected upward from said article placing part, and

said article is loaded on said pallet through said article holding members.

Claim 71 (Withdrawn): The article conveyance and storage device according to claim 53, wherein said support is formed with a molded product obtained by extruding resin or metal.